NATIONAL GUIDELINE CLEARINGHOUSE™ (NGC) GUIDELINE SYNTHESIS

MANAGEMENT OF GENITAL HERPES

GUIDELINES BEING COMPARED

1. **British Association for Sexual Health and HIV (BASHH)**. 2007 national guideline for the management of genital herpes. London (UK): British Association for Sexual Health and HIV (BASHH); 2007. 26 p. [107 references]
2. **Centers for Disease Control and Prevention (CDC)**. Diseases characterized by genital ulcers. Sexually transmitted diseases treatment guidelines 2006. MMWR Morb Mortal Wkly Rep 2006 Aug 4;55(RR-11):14-30. [222 references]
3. **Society of Obstetricians and Gynaecologists of Canada (SOGC)**. Genital herpes: gynaecological aspects. J Obstet Gynaecol Can 2008 Apr;30(4):347-53. [21 references]

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AREAS OF AGREEMENT AND DIFFERENCE

A direct comparison of British Association for Sexual Health and HIV (BASHH), Centers for Disease Control and Prevention (CDC), and Society of Obstetricians and Gynaecologists of Canada (SOGC) recommendations for the management of genital herpes is provided in the tables below.

Areas of Agreement

Antiviral Treatment of First Episode Genital Herpes

There is overall agreement that antiviral therapy offers clinical benefits to the majority of symptomatic patients and is the mainstay of management. The groups stress that antiviral therapy does not, however, alter the natural history of the disease, nor affect the risk, frequency, or severity of recurrences after the drug is discontinued.

All three groups recommend the oral antiviral drugs acyclovir, famciclovir, and valacyclovir. Recommended dosages for acyclovir and famciclovir are the same: acyclovir (200 mg five times daily or 400 mg three times daily) and famciclovir (250 mg three times daily). Refer to Areas of Difference for recommend dosages of valacyclovir.

The groups also agree that combined topical therapy with antiviral drugs offers minimal or no clinical benefit should be discouraged.

Antiviral Treatment of Recurrent Genital Herpes

The groups agree that the two primary management strategies for recurrent genital herpes are episodic antiviral therapy to ameliorate/shorten the duration of lesions, and suppressive antiviral therapy to reduce the frequency of recurrences. There is overall agreement that the decision to use episodic or suppressive therapy should be a collaborative one made between the patient and his or her care provider, and that the preferred therapy may change over time based on factors such as recurrence frequency, symptom severity, and relationship status.

Episodic therapy is patient-initiated therapy that is pre-prescribed so patients can initiate treatment immediately at the time of an outbreak. The groups agree that therapy should be initiated as soon as possible at the onset of prodrome or lesion onset. SOGC notes that episodic treatment may be recommended for patients who have infrequent lesions and a clear prodrome, and whose outbreaks have a minimal effect on their quality of life or social/sexual functioning.

There is overall agreement that suppressive therapy is usually reserved for patients with at least 6 recurrences per year, and that it is effective at significantly reducing the number of recurrences. SOGC also suggests suppressive treatment for patients who have significant complications but fewer than 6 recurrences per year; whose quality of life is significantly affected; and who suffer from social and sexual dysfunction. All three groups acknowledge that suppressive therapy, compared to episodic therapy, has the advantage of decreasing the risk of transmission to susceptible partners. All three groups note that valacyclovir has been shown to reduce the rate of acquisition of HSV-2 infection and clinically symptomatic genital herpes in serodiscordant couples.

The following courses of oral antivirals are recommended by all three groups for suppressive treatment: aciclovir 400 mg twice daily (BASHH and SOGC also recommend 200 mg four times daily [BASHH] or three to five times daily [SOGC]), famciclovir 250 mg twice daily, and valacyclovir 500 mg once daily. CDC and SOGC also cite valacyclovir 1 g once daily as a recommended treatment option.

A five-day course of oral antivirals recommended by all three groups for episodic treatment is famciclovir 125 mg twice daily. Additional five-day courses

recommended are: acyclovir 200 mg five times daily (BASHH and SOGC), acyclovir 400 mg three times daily (BASHH and CDC), acyclovir 800 mg orally twice a day for 5 days (CDC), and valacyclovir 500 mg twice daily (BASHH) or 1 g once daily (CDC). Additionally, the following short-course therapies are recommended by all three groups: valacyclovir 500 mg twice daily for 3 days (SOGC also recommends 1 g once daily for 3 days), famciclovir 1 g twice daily for one day, and aciclovir 800 mg three times daily for 2 days.

The guidelines cite patient compliance, ease of administration and cost as factors that should be considered in choosing an antiviral.

Patient Counseling and Partner Notification

The groups agree that the psychological impact of diagnosis frequently is substantial and that patients should be counseled on many aspects of infection, including the natural history of the disease, the use of antiviral drugs for symptom control, the risk of sexual transmission (including transmission as a result of asymptomatic viral shedding), the need to abstain from sexual contact when lesions or prodromal symptoms are present, the importance of disclosing infection to sex partners, and the potential benefit of condoms in reducing transmission when used consistently and correctly.

The guideline groups agree that partner notification is a means of preventing transmission as well as detecting individuals with unrecognized disease. There is agreement that all persons with genital HSV infection should be encouraged to inform current and future sex partners that they have genital herpes, and advise them that they might be infected even if asymptomatic. There is further agreement that type-specific antibody testing of asymptomatic partners of persons with HSV can clarify if risk for HSV acquisition exists.

Reducing Risk of Transmission

There is overall agreement that transmission can be minimized by abstaining from sexual activity with uninfected partners when lesions or prodromal symptoms are present, and by using antivirals to suppress asymptomatic viral shedding. There is overall agreement that while all three antivirals discussed (acyclovir, famciclovir and valacyclovir) have been shown to suppress asymptomatic shedding, suppressive therapy with valacyclovir has been demonstrated to decrease the rate of HSV-2 transmission in serodiscordant couples. With regard to condom use, all three groups agree that condoms can reduce the risk of transmission of HSV. BASHH notes, however, that the efficacy of male condoms in preventing transmission from infected females to uninfected male partners has not been demonstrated, and the efficacy of female condoms to reduce HSV transmission during intercourse has not been assessed.

Areas of Difference

Antiviral Treatment of First Episode Genital Herpes

The recommended dosage for valacyclovir varies between the groups, with BASHH recommending 500 mg twice daily and CDC and SOGC recommending 1 g twice daily.

Recommendations regarding duration of initial oral antiviral treatment differ as well. BASHH recommends a five day course, stating that there is no evidence for benefit from courses longer than five days. They add, however, that it may be prudent to review the patient after 5 days and continue therapy if new lesions are still appearing. CDC, in contrast, recommends that initial oral antiviral therapy be administered for seven to 10 days, noting that treatment may be extended if healing is incomplete after ten days of therapy. SOGC recommends a 10-day course of acyclovir and valacyclovir, but a five-day course of famciclovir.

Non-Pharmacologic Interventions

While CDC and SOGC do not recommend any non-pharmacologic interventions, BASHH recommends saline bathing, analgesia, and 5% lidocaine ointment in addition to antiviral medications.

COMPARISON OF RECOMMENDATIONS

ANTIVIRAL TREATMENT OF FIRST EPISODE GENITAL HERPES

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BASHH (2007)	**First Episode Genital Herpes** *Antiviral Drugs* • Oral antiviral drugs are indicated within 5 days of the start of the episode and while new lesions are still forming. • Aciclovir, valaciclovir, and famciclovir all reduce the severity and duration of episodes (**Level of Evidence Ib, Grade of Recommendation A**). • Antiviral therapy does not alter the natural history of the disease. • Topical agents are less effective than oral agents. • Combined oral and topical treatment is of no benefit. • Intravenous therapy is indicated only when the patient cannot swallow or tolerate oral medication because of vomiting. • There is no evidence for benefit from courses longer than five days. However, it may be prudent to review the patient after 5 days and continue therapy if new lesions are still appearing at this time. *Recommended Regimens* (All for Five Days) • Aciclovir 200 mg five times daily • Aciclovir 400 mg three times daily • Valaciclovir 500 mg twice daily • Famciclovir 250 mg three times daily

CDC (2006)	**Principles of Management of Genital Herpes** Antiviral chemotherapy offers clinical benefits to the majority of symptomatic patients and is the mainstay of management. Systemic antiviral drugs can partially control the signs and symptoms of herpes episodes when used to treat first clinical episodes and recurrent episodes or when used as daily suppressive therapy. However, these drugs neither eradicate latent virus nor affect the risk, frequency, or severity of recurrences after the drug is discontinued. Topical therapy with antiviral drugs offers minimal clinical benefit, and its use is discouraged. **First Clinical Episode of Genital Herpes** Many patients with first-episode herpes have mild clinical manifestations but later develop severe or prolonged symptoms. Therefore, patients with initial genital herpes should receive antiviral therapy. ***Recommended Regimens**** • Acyclovir 400 mg orally three times a day for 7-10 days **OR** • Acyclovir 200 mg orally five times a day for 7-10 days **OR** • Famciclovir 250 mg orally three times a day for 7-10 days **OR** • Valacyclovir 1 g orally twice a day for 7-10 days *Treatment may be extended if healing is incomplete after 10 days of therapy.
SOGC (2008)	**<u>Recommendations</u>** • The use of the anti-viral valacyclovir, coupled with condoms and safer sex counselling, is recommended for individuals with proven genital herpes. **(I-B)** **<u>Antiviral Treatment</u>** Oral antiviral agents are effective in many ways for almost all HSV

	infected patients. These agents have a very strong safety record. Topical antiviral agents have limited efficacy in acute infections and no shown efficacy in genital recurrences and therefore are not recommended. **Initial Episode** If an initial infection is suspected or diagnosed and the lesions have not fully crusted, then antiviral therapy is warranted to decrease the duration and severity of the outbreak. In initial infections, one of the following should be administered: • Acyclovir 200 mg orally 5 times a day for 10 days • Acyclovir 400 mg orally 3 times a day for 10 days • Famciclovir 250 mg orally 3 times a day for 5 days • Valacyclovir 1000 mg orally twice a day for 10 days

ANTIVIRAL TREATMENT OF RECURRENT GENITAL HERPES

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BASHH (2007)	**Recurrent Genital Herpes**
	
	• Recurrences are self-limiting and generally cause minor symptoms.
	• Management decisions should be made in partnership with the patient. Strategies include:
	  • Supportive therapy only
	  • Episodic antiviral treatments
	  • Suppressive antiviral therapy
	• The best strategy for managing an individual patient may change over time according to recurrence frequency, symptom severity, and relationship status.
	
	Episodic Antiviral Treatment (Level of Evidence Ia, Grade of Recommendation A)
	
	• Oral aciclovir, valaciclovir, and famciclovir reduce the duration (by median of 1 to 2 days) and severity of recurrent genital herpes.
	• Patient initiated treatment started early in an episode is most likely to be effective.
	• Recommended regimens (all for five days)
	  • Aciclovir 200 mg five times daily
	  • Aciclovir 400 mg three times daily for 3 to 5 days
	  • Valaciclovir 500 mg twice daily
	  • Famciclovir 125 mg twice daily
	• Short course therapies

- Aciclovir 800 mg three times daily for 2 days
- Famciclovir 1 g twice a day (bd) for one day
- Valaciclovir 500 mg bd for 3 days

Suppressive Antiviral Therapy

- Patients who have taken part in trials of suppressive therapy have had at least six recurrences per annum. Such patients have fewer or no episodes on suppressive therapy (**Level of Evidence Ib, Grade of Recommendation A**). Patients with lower rates of recurrence will probably also have fewer recurrences with treatment.
- Patients should be given full information on the advantages and disadvantages of suppressive therapy. The decision to start suppressive therapy is a subjective one, balancing the frequency of recurrence with the cost and inconvenience of treatment.
- Patient safety and resistance data for long-term suppressive therapy with aciclovir now extends to over 18 years of continuous surveillance (**Level of Evidence III, Grade of Recommendation B**).
- Recommended regimens (**Level of Evidence Ib, Grade of Recommendation A**):
    - Aciclovir 400 mg twice daily
    - Aciclovir 200 mg four times daily
    - Famciclovir 250 mg twice daily
    - Valaciclovir 500 mg once daily
- If breakthrough recurrences occur on standard treatment, the daily dosage should be increased (e.g., aciclovir 400 mg three times daily).
- Choice of treatment depends on patient compliance and cost (see Table 3 in the original guideline document).
- Suppressive therapy should be discontinued after a maximum of a year to reassess recurrence frequency. The minimum period of assessment should include two recurrences. Patients who continue to have unacceptably high rates of recurrence may restart treatment. (**Level of Evidence IV, Grade of Recommendation C**).
- Short courses of suppressive therapy may be helpful for some patients (**Level of Evidence IV, Grade of Recommendation C**).

Asymptomatic Viral Shedding

- Occurs in individuals with genital HSV-1 and those with genital HSV-2.
- Occurs most commonly in patients with genital HSV-2 infection in the first year after infection.
    - In individuals with frequent symptomatic recurrences
    - Is an important cause of transmission
    - May be reduced by aciclovir 400 mg twice daily (**Level of**

	Evidence 1b, Grade of Recommendation A)
CDC (2006)	**Established HSV-2 Infection** The majority of patients with symptomatic, first-episode genital HSV-2 infection subsequently experience recurrent episodes of genital lesions; recurrences are less frequent after initial genital HSV-1 infection. Intermittent asymptomatic shedding occurs in persons with genital HSV-2 infection, even in those with longstanding or clinically silent infection. Antiviral therapy for recurrent genital herpes can be administered either episodically to ameliorate or shorten the duration of lesions or continuously as suppressive therapy to reduce the frequency of recurrences. Many persons, including those with mild or infrequent recurrent outbreaks, benefit from antiviral therapy; therefore, options for treatment should be discussed. Some persons might prefer suppressive therapy, which has the additional advantage of decreasing the risk of genital HSV-2 transmission to susceptible partners. ***Suppressive Therapy for Recurrent Genital Herpes*** Suppressive therapy reduces the frequency of genital herpes recurrences by 70%-80% in patients who have frequent recurrences (i.e., $\geq$6 recurrences per year), and many patients report no symptomatic outbreaks. Treatment also is effective in patients with less frequent recurrences. Safety and efficacy have been documented among patients receiving daily therapy with acyclovir for as long as 6 years and with valacyclovir or famciclovir for 1 year. Quality of life frequently is improved in patients with frequent recurrences who receive suppressive, compared with episodic treatment. The frequency of recurrent genital herpes outbreaks diminishes over time in many patients, and the patient's psychological adjustment to the disease might change. Therefore, periodically during suppressive treatment (e.g., once a year), providers should discuss the need to continue therapy with the patient. Daily treatment with valacyclovir 500 mg daily decreases the rate of HSV-2 transmission in discordant, heterosexual couples in which the source partner has a history of genital HSV-2 infection. Such couples should be encouraged to consider suppressive antiviral therapy as part of a strategy to prevent transmission, in addition to consistent condom use and avoidance of sexual activity during recurrences. Suppressive antiviral therapy probably reduces transmission when used by persons who have multiple partners (including MSM) and by those who are HSV-2 seropositive without a history of genital herpes.

Recommended Regimens

- Acyclovir 400 mg orally twice a day

  OR

- Famciclovir 250 mg orally twice a day

  OR

- Valacyclovir 500 mg orally once a day

  OR

- Valacyclovir 1.0 gram orally once a day

Valacyclovir 500 mg once a day might be less effective than other valacyclovir or acyclovir dosing regimens in patients who have very frequent recurrences (i.e., ≥10 episodes per year). Several studies have compared valacyclovir or famciclovir with acyclovir. The results of these studies suggest that valacyclovir and famciclovir are comparable to acyclovir in clinical outcome. Ease of administration and cost also are important considerations for prolonged treatment.

Episodic Therapy for Recurrent Genital Herpes

Effective episodic treatment of recurrent herpes requires initiation of therapy within 1 day of lesion onset or during the prodrome that precedes some outbreaks. The patient should be provided with a supply of drug or a prescription for the medication with instructions to initiate treatment immediately when symptoms begin.

Recommended Regimens

- Acyclovir 400 mg orally three times a day for 5 days

  OR

- Acyclovir 800 mg orally twice a day for 5 days

  OR

- Acyclovir 800 mg orally three times a day for 2 days

  OR

- Famciclovir 125 mg orally twice daily for 5 days

	OR • Famciclovir 1000 mg orally twice daily for 1 day **OR** • Valacyclovir 500 mg orally twice a day for 3 days **OR** • Valacyclovir 1.0 g orally once a day for 5 days

SOGC (2008)	**<u>Recommendations</u>**
	
	• Suppressive treatment is suggested for patients who have
	  • At least 6 recurrences per year
	  • Significant complications, but fewer than 6 recurrences per year
	  • Their quality of life significantly affected
	  • Social and sexual dysfunction
	  • To lower the risk of transmission to a sexual partner or fetus/neonate **(II-B)**
	• The use of the anti-viral valacyclovir, coupled with condoms and safer sex counselling, is recommended for individuals with proven genital herpes. **(I-B)**
	
	<u>Antiviral Treatment</u>
	
	Oral antiviral agents are effective in many ways for almost all HSV infected patients. These agents have a very strong safety record. Topical antiviral agents have limited efficacy in acute infections and no shown efficacy in genital recurrences and therefore are not recommended.
	
	Recurrent Infection
	
	Both episodic and suppressive treatment regimens are available for patients with recurrent genital herpes. Treatment needs to be based on patient preferences and nature of disease. Public health indications suggest suppressive therapy to prevent transmission of the virus to others. The decision to use episodic or suppressive therapy should be shared between the patient and the care provider. There are times in an individual's life when one therapy may be more appropriate.
	
	Episodic Treatment
	
	Episodic treatment is patient-initiated therapy that needs to be pre-

prescribed so patients have medications available at the time of an outbreak. This may be recommended for patients who have infrequent lesions and a clear prodrome, and whose outbreaks have a minimal effect on their quality of life or social/sexual functioning:

Recommended antivirals should be given as soon as possible at the onset of prodrome to decrease the duration and severity of the outbreak.

Recommended Regimens

- Acyclovir 200 mg orally five times a day for 5 days
- Acyclovir 800 mg orally three times a day for 2 days
- Famciclovir 125 mg orally twice a day for 5 days
- Famciclovir 1000 mg orally twice a day for 1 day
- Valacyclovir 500 mg orally twice a day for 3 days
- Valacyclovir 1.0 g orally once a day for 3 days

Topical antiviral treatment has never been shown to be of any help in minimizing recurrences.

Suppressive Treatment

Suppressive treatment is suggested for patients having at least one of the following effects from their infection: significant problems with health-related quality of life; social and sexual dysfunction; a need to lower the risk of transmission to a sexual partner or fetus/neonate; significant complications with fewer than 6 recurrences per year; at least 6 recurrences per year. In addition, patients with recurrent genital HSV who have susceptible partners or who engage in sex with new or multiple partners should be offered suppressive therapy for the prevention of transmission to others. This recommendation is based on data from a valacyclovir suppression study in which the use of the antiviral valacyclovir coupled with condoms and safer sex counselling was shown to reduce the risk of sexual transmission by 48%. This effect was limited to the time of use. Efficacy was proportional to compliance. The rate of transmission was evaluated to be 1.1% for those taking at least 95% of their pills.

Suppressive therapy consists of the following:

- Acyclovir 400 mg orally twice a day
- Acyclovir 200 mg three to five times a day
- Famciclovir 250 mg orally twice a day
- Valacyclovir
    - 500 mg orally once a day
    - 1 g orally once a day

The length of suppressive therapy is adjusted to the patient's needs.

	The prescription should be renewed yearly, and a revaluation of the patient's situation is recommended at this time. Suppressive dosing for pregnancy is specific.
MANAGEMENT OF SEVERE DISEASE Abbreviations Back to TOC	
BASHH (2007)	**Management of Complications** • Hospitalisation may be required for urinary retention, meningism, and severe constitutional symptoms. • If catheterisation is required, suprapubic catheterisation is preferred to prevent theoretical risk of ascending infection, to reduce the pain associated with the procedure, to allow normal micturition to be restored without multiple removals and recatheterisations. (**Level of Evidence IV, Grade of Recommendation C**)
CDC (2006)	**Severe Disease** IV acyclovir therapy should be provided for patients who have severe HSV disease or complications that necessitate hospitalization (e.g., disseminated infection, pneumonitis, or hepatitis) or CNS complications (e.g., meningitis or encephalitis). The recommended regimen is acyclovir 5-10 mg/kg body weight IV every 8 hours for 2-7 days or until clinical improvement is observed, followed by oral antiviral therapy to complete at least 10 days total therapy.
SOGC (2008)	No recommendations offered
NON-PHARMACOLOGIC INTERVENTIONS Abbreviations Back to TOC	
BASHH (2007)	**First Episode Genital Herpes** General Advice • Saline bathing • Analgesia • Topical anaesthetic agents (e.g., 5% lidocaine [lignocaine] ointment) may be useful to apply especially prior to micturition but should be used with caution because of the risk of potential sensitization.

	Recurrent Genital Herpes
	
	• Management decisions should be made in partnership with the patient. Strategies include:
	  • Supportive therapy only
	  • Episodic antiviral treatments
	  • Suppressive antiviral therapy
	• The best strategy for managing an individual patient may change over time according to recurrence frequency, symptom severity, and relationship status.
	• General advice (**Level of Evidence IV, Grade of Recommendation C**)
	  • Saline bathing
	  • Vaseline
	  • Analgesia
	  • 5% lidocaine (lignocaine) ointment

CDC (2006)	No recommendations offered
SOGC (2008)	No recommendations offered
PATIENT COUNSELING AND PARTNER NOTIFICATION Abbreviations Back to TOC	

BASHH (2007)	**Counselling**
	
	• Diagnosis often causes considerable distress. Most people with recurrences adjust over time, but antiviral treatment can probably reduce anxiety, assist adjustment and improve quality of life (**Level of Evidence II, Grade of Recommendation B**).
	• Counselling should be as practical as possible and address particular personal situations; issues for someone in a long-term relationship are likely to be different from those for someone seeking a partner.
	• Disclosure is often a difficult issue for patients but is more likely to happen in the context of an on-going relationship.
	• Failure by the patient to control everyday stresses does not affect recurrences.
	• For most patients one or two counselling sessions with an invitation to return in case of difficulty should be enough.
	• Patients who have failed to adjust to the diagnosis after a year should be considered for more intensive counselling interventions.
	• Counselling should cover:
	  • Natural history
	  • The use of antiviral drugs for symptom control; current

uncertainties about impact on infectivity should be discussed
- Discussion of the risks of transmission by sexual contact related to the actual situation of the patient
- Reassurance regarding transmission by fomites and autoinoculation after the first infection is over
- Abstinence from sexual contact during lesional recurrences or prodromes
- Transmission may occur as a result of asymptomatic viral shedding
- Seropositive patients with unrecognised recurrences can be taught to recognise symptomatic episodes after counselling and this may prevent onward transmission
- The possible benefit of condoms in reducing transmission, emphasizing that their use cannot completely prevent transmission
- Pregnancy issues for both men and women

Patient Support

- The distressing nature of symptoms and the stigma associated with HSV infection, as with other conditions, often results in impaired patient retention of information given by clinical staff.
- The Family Planning Association (FPA) produces a range of leaflets on sexual health for the National Health Service (NHS). Their leaflet on genital herpes provides comprehensive patient information based on British Association of Sexual Health and HIV (BASHH) guidelines and can be purchased or viewed as a non-printable PDF file on the FPA Web site.
- Patients frequently benefit from talking to the Herpes Viruses Association Helpline 0845 123 2305 - weekdays

  Office phone line to order patient materials 020 7607 9661

  Email: info@herpes.org.uk

  Website: www.herpes.org.uk

Partner Notification

- Is an effective way of detecting individuals with unrecognised disease.
- May clarify whether a partner is infected or not (utilising type-specific antibody testing if necessary). This may help to relieve anxiety about transmission or reinforce the need to reduce the risk of transmission.
- May help with the counselling process.
- Awareness of the diagnosis in a partner or ex-partner may prevent further onward transmission.

CDC (2006)	**Counseling** Counseling of infected persons and their sex partners is critical to management of genital herpes. The goal of counseling is to 1) help patients cope with the infection and 2) prevent sexual and perinatal transmission. Although initial counseling can be provided at the first visit, many patients benefit from learning about the chronic aspects of the disease after the acute illness subsides. Multiple resources, including websites (http://www.ashastd.org and http://www.ihmf.org) and printed materials are available to assist patients, their partners, and clinicians in counseling. HSV-infected persons might express anxiety concerning genital herpes that does not reflect the actual clinical severity of their disease; the psychological impact of infection frequently is substantial. Common concerns regarding genital herpes include the severity of initial clinical manifestations, recurrent episodes, sexual relationships and transmission to sex partners, and ability to bear healthy children. The misconception that HSV causes cancer should be dispelled. The psychological effect of a serologic diagnosis of HSV-2 infection in a person with asymptomatic or unrecognized genital herpes appears small and transient. The following recommendations apply to counseling of persons with HSV infection: • Persons who have genital herpes should be educated concerning the natural history of the disease, with emphasis on the potential for recurrent episodes, asymptomatic viral shedding, and the attendant risks of sexual transmission. • Persons experiencing a first episode of genital herpes should be advised that suppressive therapy is available and is effective in preventing symptomatic recurrent episodes and that episodic therapy sometimes is useful in shortening the duration of recurrent episodes. • All persons with genital HSV infection should be encouraged to inform their current sex partners that they have genital herpes and to inform future partners before initiating a sexual relationship. • Sexual transmission of HSV can occur during asymptomatic periods. Asymptomatic viral shedding is more frequent in genital HSV-2 infection than genital HSV-1 infection and is most frequent during the first 12 months after acquiring HSV-2. • All persons with genital herpes should remain abstinent from sexual activity with uninfected partners when lesions or prodromal symptoms are present. • The risk of HSV-2 sexual transmission can be decreased by the daily use of valacyclovir by the infected person. • Recent studies indicate that latex condoms, when used consistently and correctly, can reduce the risk for genital herpes transmission.

	• Sex partners of infected persons should be advised that they might be infected even if they have no symptoms. Type-specific serologic testing of asymptomatic partners of persons with genital herpes can determine whether risk for HSV acquisition exists. • The risk for neonatal HSV infection should be explained to all persons, including men. Pregnant women and women of childbearing age who have genital herpes should inform their providers who care for them during pregnancy as well as those who will care for their newborn infant. Pregnant women who are not infected with HSV-2 should be advised to avoid intercourse during the third trimester with men who have genital herpes. Similarly, pregnant women who are not infected with HSV-1 should be counseled to avoid genital exposure to HSV-1 during the third trimester (e.g., oral sex with a partner with oral herpes and vaginal intercourse with a partner with genital HSV-1 infection). • Asymptomatic persons diagnosed with HSV-2 infection by type-specific serologic testing should receive the same counseling messages as persons with symptomatic infection. In addition, such persons should be taught about the clinical manifestations of genital herpes.
SOGC (2008)	**Prevention of Stigmatization** Sexually transmitted infections, including genital herpes, are frequently stigmatized and associated with negative feelings such as depressive mood, isolation, fear of rejection, and fear of being discovered, and with self-destructive behaviour. Health care providers can help by referring the patients to psychologists or sexual medicine experts, and/or self-help groups. Stigmatization may prevent patients from accessing appropriate curative and preventive care. **Disclosure of Status** If a new partner is told about genital herpes status, transmission is 50% less likely. Since median acquisition time occurs 61 days after initiation of intercourse with a new partner, efforts should be made for proper and timely disclosure of HSV status to ensure barrier methods are used, with or without antiviral protection. Most of those resisting disclosure fear rejection. They should be told that all potential sexual partners have the right to be informed before they consent to sexual activity, and they should be given advice on how to disclose their status. **Conclusion** Antiviral therapy and personalized counselling help patients to adapt

	better to the challenges of genital herpes and help prevent transmission of infection.

REDUCING RISK OF TRANSMISSION
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BASHH (2007)	**Prevention of Transmission** • Condoms may be partially effective in preventing acquisition of HSV, especially in preventing transmission from infected males to their female sex partners. The efficacy of male condoms in preventing transmission from infected females to uninfected male partners has not been demonstrated, and the efficacy of female condoms to reduce HSV transmission during intercourse has not been assessed. • Aciclovir, famciclovir, and valaciclovir all suppress symptomatic and asymptomatic viral shedding. These drugs have been shown in clinical trials to reduce asymptomatic HSV shedding by about 80% to 90%. Although the threshold for infection from asymptomatic shedding has not been established, small studies have shown that valaciclovir appears to suppress asymptomatic shedding better than famciclovir. Aciclovir (400 mg twice daily) has been shown to suppress asymptomatic shedding at least as well as valaciclovir (1000 mg daily). • Suppressive antiviral therapy with valaciclovir 500 mg once daily reduces the rate of acquisition of HSV-2 infection and clinically symptomatic genital herpes in serodiscordant couples. Other antivirals may be effective but efficacy has not been proven in clinical trials.
CDC (2006)	**Suppressive Therapy for Recurrent Genital Herpes** Daily treatment with valacyclovir 500 mg daily decreases the rate of HSV-2 transmission in discordant, heterosexual couples in which the source partner has a history of genital HSV-2 infection. Such couples should be encouraged to consider suppressive antiviral therapy as part of a strategy to prevent transmission, in addition to consistent condom use and avoidance of sexual activity during recurrences. Suppressive antiviral therapy probably reduces transmission when used by persons who have multiple partners (including men who have sex with men [MSM]) and by those who are HSV-2 seropositive without a history of genital herpes. **Counseling** • Sexual transmission of HSV can occur during asymptomatic periods. Asymptomatic viral shedding is more frequent in genital HSV-2 infection than genital HSV-1 infection and is most

	frequent during the first 12 months after acquiring HSV-2. • All persons with genital herpes should remain abstinent from sexual activity with uninfected partners when lesions or prodromal symptoms are present. • The risk of HSV-2 sexual transmission can be decreased by the daily use of valacyclovir by the infected person. • Recent studies indicate that latex condoms, when used consistently and correctly, can reduce the risk for genital herpes transmission.

SOGC (2008)	**Recommendations**
	
	• Up to 70% of all genital HSV-2 infections are transmitted during asymptomatic shedding; therefore, the use of condoms is recommended to lessen the likelihood of disease transmission. **(II-A)**
	• Suppressive treatment is suggested for patients who have
	  • At least 6 recurrences per year
	  • Significant complications, but fewer than 6 recurrences per year
	  • Their quality of life significantly affected
	  • Social and sexual dysfunction
	  • To lower the risk of transmission to a sexual partner or fetus/neonate. **(II-B)**
	• The use of the anti-viral valacyclovir, coupled with condoms and safer sex counselling, is recommended for individuals with proven genital herpes. **(I-B)**
	
	Conclusion
	
	Antiviral therapy and personalized counselling help patients to adapt better to the challenges of genital herpes and help prevent transmission of infection.

STRENGTH OF EVIDENCE AND RECOMMENDATION GRADING SCHEMES Abbreviations Back to TOC	
BASHH (2007)	**Levels of Evidence** **Ia** • Evidence obtained from meta-analysis of randomised controlled trials

	Ib • Evidence obtained from at least one randomised controlled trial **IIa** • Evidence obtained from at least one well designed controlled study without randomisation **IIb** • Evidence obtained from at least one other type of well designed quasi-experimental study **III** • Evidence obtained from well designed non-experimental descriptive studies such as comparative studies, correlation studies, and case control studies **IV** • Evidence obtained from expert committee reports or opinions and/or clinical experience of respected authorities **Grading of Recommendations** **A (Evidence Levels Ia, Ib)** • Requires at least one randomised controlled trial as part of the body of literature of overall good quality and consistency addressing the specific recommendation. **B (Evidence Levels IIa, IIb, III)** • Requires availability of well conducted clinical studies but no randomised clinical trials on the topic of recommendation. **C (Evidence Level IV)** • Requires evidence from expert committee reports or opinions and/or clinical experience of respected authorities. • Indicates absence of directly applicable studies of good quality.
CDC (2006)	Not applicable

SOGC (2008)	**Quality of Evidence Assessment*** **I**: Evidence obtained from at least one properly randomized controlled trial **II-1**: Evidence from well-designed controlled trials without randomization **II-2**: Evidence from well-designed cohort (prospective or retrospective) or case-control studies, preferably from more than one centre or research group **II-3**: Evidence obtained from comparisons between times or places with or without the intervention. Dramatic results in uncontrolled experiments (such as the results of treatment with penicillin in the 1940s) could also be included in this category **III**: Opinions of respected authorities, based on clinical experience, descriptive studies, or reports of expert committees *Adapted from the Evaluation of Evidence criteria described in the Canadian Task Force on Preventive Health Care. **Classification of Recommendations*** **A**. There is good evidence to recommend the clinical preventive action. **B**. There is fair evidence to recommend the clinical preventive action. **C**. The existing evidence is conflicting and does not allow to make a recommendation for or against use of the clinical preventive action; however, other factors may influence decision-making. **D**. There is fair evidence to recommend against the clinical preventive action. **E**. There is good evidence to recommend against the clinical preventive action. **I**. There is insufficient evidence (in quantity or quality) to make a recommendation; however, other factors may influence decision-making. *Adapted from the Evaluation of Evidence criteria described in the Canadian Task Force on Preventive Health Care.

Click on the links below for details of guideline development methodology		
BASHH (2007)	**CDC (2006)**	**SOGC (2008)**
All three groups performed searches of electronic databases to collect/select the evidence. BASHH and SOGC provide a description of the process. With regard to methods used to assess the quality and strength of the evidence, BASHH and SOGC weighted the evidence according to a rating scheme and provide the scheme. CDC employed subjective review. A systematic review was carried out by all three groups to analyze the evidence; the CDC systematic review incorporated evidence tables. CDC provides a description of the evidence analysis process. Methods used to formulate the recommendations were also similar, with all three groups utilizing expert consensus. CDC specifies that a consensus development conference was held. BASHH and CDC rate the strength of the recommendations according to a scheme and provide the scheme. None of the groups performed a formal cost analysis or reviewed published cost analyses. To validate their guidelines, SOGC and BASHH both sought internal review; BASHH also sought external review. Both provide details of the validation process.		

SOURCE(S) OF FUNDING Abbreviations Back to TOC	
BASHH (2007)	No specific or external funding was sought or provided in the development of this guideline.
CDC (2006)	United States Government
SOGC (2008)	Society of Obstetricians and Gynaecologists of Canada

BENEFITS AND HARMS Abbreviations Back to TOC	
Benefits	
BASHH (2007)	• Appropriate diagnosis, prognosis, counselling, and management of genital herpes • Prevention of morbidity (physical and psychological) associated

	with genital herpes and reduced transmission and prevalence
CDC (2006)	• Appropriate diagnosis, treatment, and follow-up of patients with genital ulcers • Decreased transmission of HSV to infants and sexual partners • Improved quality of life
SOGC (2008)	Appropriate prevention of complications and transmission of genital herpes
Harms	
BASHH (2007)	Topical anaesthetic agents should be used with caution because of the risk of potential sensitization.
CDC (2006)	• Allergic and other adverse reactions to acyclovir, valacyclovir, and famciclovir are rare. Desensitization to acyclovir has been described previously. • The safety of systemic acyclovir, valacyclovir, and famciclovir therapy in pregnant women has not been definitively established. • Prenatal exposure to valacyclovir and famciclovir is too limited to provide useful information on pregnancy outcomes.
SOGC (2008)	Up to one half of viral culture tests performed during a recurrence may come back as falsely negative, because of improper sampling techniques and improper specimen handling and transportation.

Abbreviations
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BASHH, British Association for Sexual Health and HIV

CDC, Centers for Disease Control and Prevention

HIV, human immunodeficiency virus

HSV, herpes simplex virus

MSM, men who have sex with men

SOGC, Society of Obstetricians and Gynaecologists of Canada

STD, sexually transmitted disease

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